

AMENDMENTS TO THE CLAIMS

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (New) A method for sending a feedback message for an automatic repeat request, comprising:

estimating a last block sequence number of successive blocks that are successfully received, to record the estimated last block sequence number in a first field;

estimating a number of groups of successive blocks that are successfully received after the last block sequence number as a number of ACKnowledgement (ACK) maps to record in a second field;

recording a start block sequence number of each of the ACK maps in a third field of each of the ACK maps;

estimating a number of successive blocks that are successfully received after the start block sequence number of each of the ACK maps, to record the estimated number of successive blocks in a fourth field of each of the ACK maps; and

sending a feedback message including fields from the first field to the fourth field.

14. (New) The method of claim 13, further comprising recording an ACK type in a fifth field, and

wherein the feedback message further includes the fifth field.

15. (New) The method of claim 14, wherein the ACK type indicates one of a selective ACK type, a cumulative ACK type, a cumulative-selective ACK type, and a cumulative-bulk ACK type, and wherein, if the ACK type is the cumulative-bulk ACK type, recording the start block sequence number and estimating lengths of the groups.

16. (New) A method for sending a feedback message for an automatic repeat request, comprising:

estimating a last block sequence number of successive blocks that are successfully received, to record the estimated last block sequence number in a first field;

recording, in a second field, types of groups of successive blocks that are successfully or unsuccessfully received after the last block sequence number;

estimating lengths of the groups to record the estimated lengths of the groups in a third field; and

sending a feedback message including fields from the first field to the third field.

17. (New) The method of claim 16, further comprising recording an ACK type in a fourth field, wherein the feedback message further includes the fourth field.

18. (New) The method of claim 17, wherein the ACK type indicates one of a selective ACK type, a cumulative ACK type, a cumulative-selective ACK type, and a cumulative-bulk ACK type, and wherein, if the ACK type is the cumulative-bulk ACK type, recording the types of the groups and estimating lengths of the groups

19. (New) A method for sending a feedback message for an automatic repeat request, comprising:

recording an ACK type in a first field, wherein the ACK type indicates one of a selective ACK type, a cumulative ACK type, a cumulative-selective ACK type, and a cumulative-bulk ACK type;

estimating a last block sequence number of successive blocks that are successfully received, to record the estimated last block sequence number in a second field;

estimating a number of ACK maps to record the estimated number of the ACK maps in a third field;

if the ACK type is the cumulative-bulk ACK type, recording, in a fourth field of each of the ACK maps, types of the groups of successive blocks that are successfully or unsuccessfully received after the last block sequence number, wherein the types of the groups indicate one of an ACK type and a Negative ACKnowledgement (NACK) type and estimating lengths of the groups for each of the ACK maps, to record the estimated lengths of the groups in a fifth field of each of the ACK maps; and

sending a feedback message including fields from the first field to the fifth field.

20. (New) A method for sending a feedback message for an automatic repeat request, comprising:

estimating a last block sequence number of successive blocks that are successfully received, to record the estimated last block sequence number in a first field;

estimating a number of groups of successive blocks that are successfully or unsuccessfully received after the last block sequence number, to record the estimated number of groups in a second field;

estimating lengths of the groups to record the estimated lengths of the groups in a third field; and

sending a feedback message including fields from the first field to the third field.

21. (New) The method of claim 20, further comprising recording types of the groups in a fourth field, wherein the feedback message further includes the fourth field.

22. (New) The method of claim 21, further comprising recording an ACK type in a fifth field, wherein the feedback message further includes the fifth field.

23. (New) The method of claim 22, wherein the ACK type indicates one of a selective ACK type, a cumulative ACK type, a cumulative-selective ACK type, and a cumulative-bulk ACK type, and wherein, if the ACK type is the cumulative-bulk ACK type, estimating a number of the groups, recording the types of the groups, and estimating the lengths of the groups to record the estimated lengths of the groups.

24. (New) The method of claim 23, wherein the types of the groups indicate one of an ACK type and a NACK type.

25. (New) A method for sending a feedback message for an automatic repeat request, comprising:

recording an ACK type in a first field, wherein the ACK type indicates one of a selective ACK type, a cumulative ACK type, a cumulative-selective ACK type, and a cumulative-bulk ACK type;

estimating a last block sequence number of successive blocks that are successfully received, to record the last block sequence number in a second field;

estimating a number of ACK maps to record the estimated number of the ACK maps in a third field;

if the ACK type is the cumulative-bulk ACK type, estimating a number of groups of successive blocks that are successfully or unsuccessfully received after the last block sequence number, to record information on the estimated number of groups for each of the ACK maps in a fourth field of each of the ACK maps, recording types of the groups for each of the ACK maps in a fifth field of each of the ACK maps, wherein the types of the groups indicates one of an ACK type and a NACK type, estimating lengths of the groups for each of the ACK maps, to record the estimated lengths of the groups in a sixth field of each of the ACK maps; and

sending a feedback message including fields from the first field to the sixth field.

26. (New) A method for sending a feedback message for an automatic repeat request, comprising:

estimating a last block sequence number of successive blocks that are successfully received, to record the last block sequence number in a first field;

estimating lengths of groups of successive blocks that are successfully or unsuccessfully received after the last block sequence number, to record the estimated lengths of the groups in a second field by recording length of a group for ACK messages and length of a group for NACK messages in turn; and

sending a feedback message including the first field and the second field.

27. (New) The method of claim 26, further comprising recording an ACK type in a third field, wherein the feedback message further includes the third field.

28. (New) The method of claim 27, wherein the ACK type indicates one of a selective ACK type, a cumulative ACK type, a cumulative-selective ACK type, and a cumulative-bulk ACK type, and wherein estimating the lengths comprises estimating the lengths if the ACK type is the cumulative-bulk ACK type.

29. (New) A method for sending a feedback message for an automatic repeat request, comprising:

recording an ACK type in a first field, wherein the ACK type indicates one of a selective ACK type, a cumulative ACK type, a cumulative-selective ACK type, and a cumulative-bulk ACK type;

estimating a last block sequence number of successive blocks that are successfully received, to record the last block sequence number in a second field;

estimating the number of ACK maps to record the number of the ACK maps in a third field;

if the ACK type is the cumulative-bulk ACK type, estimating lengths of groups of successive blocks that are successfully or unsuccessfully received after the last block sequence number, to record the estimated lengths of the groups for each of the ACK maps in a fourth field of each of the ACK maps by recording length of a group for ACK messages and length of a group for NACK messages in turn; and

sending a feedback message including fields from the first field to the fourth field.

30. (New) A method for sending a feedback message for an automatic repeat request, comprising:

estimating a last block sequence number of successive blocks that are successfully received, to record the last block sequence number in a first field;

estimating the number of groups of successive blocks that are successfully or unsuccessfully received after the last block sequence number, to record information on the

number of groups in a second field;

estimating length of a first group of the groups to record the length of the first group in a third field;

recording a type of a second group of the first group in a fourth field;

estimating length of the second group to record the length of the second group in a fifth field;

recording a type of a third group in a sixth field; and

sending a feedback message including fields from the first field to the sixth field.

31. (New) The method of claim 30, further comprising recording an ACK type in a seventh field, and

wherein the feedback message further includes the seventh field.

32. (New) The method of claim 31, wherein the ACK type indicates one of a selective ACK type, a cumulative ACK type, a cumulative-selective ACK type, and a cumulative-bulk ACK type,

wherein, if the ACK type is the cumulative-bulk ACK type, estimating a number of the groups, estimating the length of the first group comprises estimating the length of the first group, recording the a type of the second group, estimating the length of the second group; and

wherein, if the ACK type is the cumulative-bulk ACK type, recording the type of a next group of the next group.